

Measurement of Reverse Flow Generated at Cold Exit of Vortex Tube

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Abstract : In order to clarify the structure of the cold flow discharged from the vortex tube (VT), the pressure of the cold flow was measured, and a simple flow visualization technique using a 0.75 mm-diameter needle and an oily paint is made to study the reverse flow at the cold exit. It is clear that a negative pressure and positive pressure region exist at a certain pressure and cold fraction area, and that a reverse flow is observed in the negative pressure region.

Keywords : flow visualization, pressure measurement, reverse flow, vortex tube

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